

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions, and listings, of claims in this application.

Listing of Claims

- 1-6. (Canceled)
7. (Currently Amended) A composition comprising a protein in crystalline form wherein the protein consists of SEQ ID NO:5, wherein said protein ~~forms a~~ is in complex with ~~an inhibitor ligand~~ trichostatin and wherein the protein crystal has a crystal lattice in a $P2_12_12_1$ space group and unit cell dimensions, $\pm 5\%$, of $a=92.1\text{\AA}$, $b=97.6\text{\AA}$, $c=138.9\text{\AA}$, and $\alpha=\beta=\gamma=90^\circ$.
8. (Currently Amended) The composition according to claim 7 wherein the protein crystal ~~unit cell~~ comprises three ~~molecules of the protein molecules~~.
9. (Canceled)
10. (Previously Presented) The composition according to claim 7 wherein the protein crystal diffracts X-rays for a determination of structure coordinates to a resolution of a value equal to or less than 3.0 Angstroms.
- 11-24. (Canceled)
25. (Currently Amended) A method comprising:
- forming a crystallization volume comprising a precipitant solution and a protein that consists of SEQ ID NO:5, wherein said protein ~~forms a~~ is in complex with ~~an inhibitor ligand~~ trichostatin and ~~wherein the protein crystal has a crystal lattice in a~~ $P2_12_12_1$ space group and unit cell dimensions, $\pm 5\%$, of $a=92.1\text{\AA}$, $b=97.6\text{\AA}$, $c=138.9\text{\AA}$, and $\alpha=\beta=\gamma=90^\circ$; and
- storing the crystallization volume under conditions suitable for crystal formation of the protein, wherein the protein crystal has a crystal lattice in a $P2_12_12_1$ space group and unit cell dimensions, $\pm 5\%$, of $a=92.1\text{\AA}$, $b=97.6\text{\AA}$, $c=138.9\text{\AA}$, and $\alpha=\beta=\gamma=90^\circ$.

26. (Currently Amended) The method according to claim 25 wherein the protein crystal ~~unit cell~~ comprises three molecules of the protein ~~molecules~~.
27. (Canceled)
28. (Previously Presented) The method according to claim 25 wherein a protein crystal is produced that diffracts X-rays for a determination of structure coordinates to a resolution of a value equal to or less than 3.0 Angstroms.
- 29-30. (Canceled)
31. (Previously Presented) The method according to claim 25 wherein a protein crystal is produced, the method further comprising:
- diffracting the protein crystal to produce a diffraction pattern; and
 - solving the structure of the protein from the diffraction pattern.
- 32-48. (Canceled)
49. (Currently Amended) The method according to claim 31, the method further comprising:
- performing rational drug design using the solved structure;
 - identifying one or more entities that potentially associate with the protein crystal,
 - selecting one or more entities based on the rational drug design; and
 - contacting the selected one or more entities with the protein.
50. (Currently Amended) The method according to claim ~~[[45]]~~ 49, the method further comprising measuring an activity of the protein when contacted with the one or more entities.
51. (Currently Amended) The method according to claim ~~[[45]]~~ 49, the method further comprising comparing activity of the protein in a presence of and in the absence of the one or more entities; and selecting entities where activity of the protein changes depending whether a particular entity is present.

52. (Currently Amended) The method according to claim [[45]] 49, the method further comprising contacting cells expressing the protein with the one or more entities and detecting a change in a phenotype of the cells when a particular entity is present.

53. (Canceled)